

0734556

European Patent  
OfficeSUPPLEMENTARY  
EUROPEAN SEARCH REPORTApplication Number  
EP 95 90 5366

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
	No further relevant documents disclosed -----		G07F7/10
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			G07F G06F
	The supplementary search report has been drawn up for the claims attached hereto.		
Place of search <b>THE HAGUE</b>		Date of completion of the search <b>29 April 1998</b>	Examiner <b>Pottiez, M</b>
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

1  
EPO FORM 1503 03.82 (P04C04)

## AMENDED CLAIMS

[received by the International Bureau on 3 July 1995 (03.07.95).  
original claims 1-22 replaced by amended claims 1-42 (13 pages)]

1           1. A network sales system providing for real-time  
2 authorization of purchase transactions, comprising:  
3           a plurality of buyer computers; and  
4           a plurality of merchant computers;  
5           said plurality of buyer computers and said  
6 plurality of merchant computers being interconnected by a  
7 public packet switched communications network;  
8           at least one of said plurality of merchant  
9 computers being programmed to store digital  
10 advertisements in a database;  
11           each one of said buyer computers being programmed  
12 to receive a user inquiry and, in response to said user  
13 inquiry, to select at least one of said merchant  
14 computers and to transmit a network request thereto;  
15           at least one of said merchant computers being  
16 programmed to cause one of said digital advertisements to  
17 be communicated to said one of said buyer computers over  
18 said public packet switched communications network in  
19 response to said network request from said buyer  
20 computer;  
21           said one of said buyer computers being programmed  
22 to display said one of said digital advertisements, and,  
23 in response to a user request, to transmit to at least  
24 one of said merchant computers a purchase message and to  
25 cause a payment request, comprising a payment amount, to  
26 be transmitted into a payment system in order to initiate  
27 authorization of purchase of a product having real  
28 monetary value advertised in said one of said digital  
29 advertisements and in order to initiate recordation of  
30 said payment request and an authorization in a settlement  
31 database;  
32           at least one of said merchant computers being  
33 programmed to receive said purchase message, and to cause  
34 said product to be sent to said user conditioned on said

35 purchase transaction having been authorized in real time  
36 by a financial authorization network external to said  
37 network sales system, based on an external credit card  
38 account or an external demand deposit account having  
39 sufficient credit or funds of real monetary value  
40 available to said principal making said payment, and  
41 conditioned on at least one message transmitted over said  
42 public packet switched communications network in  
43 connection with purchase of said product not being a  
44 replay of a message previously transmitted over said  
45 public packet switched communications network.

1           2. A network sales system in accordance with  
2 claim 1, wherein said payment system is configured to  
3 perform a replay check of said payment request to  
4 determine whether an identical payment request was  
5 previously transmitted to said payment system.

1           3. A network sales system in accordance with  
2 claim 1, wherein said payment system verifies an  
3 authenticator in order to verify said identity of said  
4 principal making payment.

1           4. A network sales system in accordance with  
2 claim 3, wherein said payment system, upon verification  
3 of said authenticator, sends an authorization request to  
4 said financial authorization network and receives  
5 authorization from said financial authorization network.

1           5. A network sales system in accordance with  
2 claim 1, wherein at least one of said merchant computers  
3 is programmed to communicate a missing payment  
4 information request message to said buyer computer to  
5 obtain missing payment information, said buyer computer  
6 is programmed to query a user for said missing payment

7 information and to transmit said missing payment  
8 information to at least one of said merchant computers.

1           6. A network sales system in accordance with  
2 claim 1, wherein said payment request comprises a payment  
3 order that describes the identity of a sender, a payment  
4 amount, a beneficiary, and a nonce.

1           7. A network sales system in accordance with  
2 claim 1, wherein said payment system is external to said  
3 plurality of buyer computers and said plurality of  
4 merchant computers.

1           8. A network sales system in accordance with  
2 claim 1, wherein said demand deposit account comprises a  
3 debit card account.

1           9. A network payment system for transferring  
2 funds having real monetary value from a sender to a  
3 beneficiary and providing for real-time authorization of  
4 payment transactions by a financial authorization network  
5 external to said network payment system, comprising:  
6           a plurality of client computers; and  
7           at least one payment computer;  
8           said client computers and said payment computer  
9 being interconnected by a public packet switched  
10 communications network;  
11           each one of said client computers being programmed  
12 to construct a payment request specifying a payment  
13 amount to be transferred from a sender to a beneficiary,  
14 and to cause said payment request to be transmitted to  
15 said payment computer;  
16           said payment computer being programmed to cause a  
17 message to be transmitted into said financial  
18 authorization network external to said network payment

19 system in order to verify that said sender has adequate  
20 funds or credit having real monetary value, to receive an  
21 authorization from said financial authorization network  
22 in response to said message, to transmit an authorization  
23 message to said client computer, to cause said payment  
24 request and authorization to be recorded in a settlement  
25 database, and to cause funds having real monetary value  
26 to be transferred from said sender to said beneficiary  
27 conditioned on said payment request having been  
28 authorized in real time by said financial authorization  
29 network based on an external credit card account or an  
30 external demand deposit account having sufficient credit  
31 or funds of real monetary value available to said sender,  
32 and conditioned on at least one message transmitted over  
33 said public packet switched communications network in  
34 connection with transfer of said funds not being a replay  
35 of a message previously transmitted over said public  
36 packet switched communications network.

1 10. A network payment system in accordance with  
2 claim 9, wherein said payment computer is programmed to  
3 perform a replay check of said payment request to  
4 determine whether an identical payment request was  
5 previously transmitted to said payment computer.

1 11. A network payment system in accordance with  
2 claim 9, wherein said payment request comprises at least  
3 a partial delivery address, and wherein said payment  
4 computer is programmed to cause said delivery address to  
5 be checked against a database of allowed delivery  
6 addresses for said sender.

1 12. A network payment system in accordance with  
2 claim 9, wherein said payment computer is programmed to  
3 cause at least partial allowed delivery addresses for

4 said sender to be determined, and wherein said  
5 authorization message comprises said at least partial  
6 allowed delivery addresses.

1 13. A network payment system in accordance with  
2 claim 9, wherein said authorization message comprises an  
3 authenticator.

1 14. A network payment system in accordance with  
2 claim 9, wherein said client computer is programmed to  
3 cause an authenticator that verifies to said payment  
4 computer the identity of said sender to be transmitted to  
5 said payment computer, and wherein said payment computer  
6 is programmed to examine said authenticator to verify  
7 said identity of said sender.

1 15. A network payment system in accordance with  
2 claim 14, wherein said client computer is programmed to  
3 generate a next expected transaction identifier for said  
4 sender and to use it to create said authenticator, and  
5 wherein said payment computer is programmed to generate  
6 said next expected transaction identifier for said sender  
7 and to verify that said authenticator was created using  
8 said next expected transaction identifier.

1 16. A network payment system in accordance with  
2 claim 14, wherein said client computer is programmed to  
3 generate said authenticator using an external device, and  
4 wherein said payment computer is programmed to verify  
5 that said authenticator was created using said external  
6 device.

1 17. A network payment system in accordance with  
2 claim 14, wherein said payment request comprises a  
3 network address of said client computer, and wherein said

4 payment computer is programmed to verify that said  
5 payment request was constructed at said network address.

1 18. A network payment system in accordance with  
2 claim 13, wherein said payment request comprises a  
3 network address of said client computer, and wherein said  
4 payment computer is programmed to check said network  
5 address against a database of allowed client addresses  
6 for said sender.

1 19. A network payment system in accordance with  
2 claim 9, wherein said payment computer is programmed to  
3 determine whether real-time authorization is necessary  
4 and to cause said message to be transmitted into said  
5 financial authorization network to verify that said  
6 sender has adequate funds or credit only if said payment  
7 computer has determined that real-time authorization is  
8 necessary.

1 20. A network payment system in accordance with  
2 claim 9, wherein said demand deposit account comprises a  
3 debit card account.

1 21. A method of effecting sales over a network  
2 sales system comprising a plurality of buyer computers  
3 and a plurality of merchant computers interconnected by a  
4 public packet switched communications network, said  
5 method providing for real-time authorization of purchase  
6 transactions and comprising the steps of:  
7 storing digital advertisements in a database;  
8 receiving a user inquiry at one of said buyer  
9 computers and, in response to said user inquiry,  
10 selecting one of said merchant computers, and  
11 transmitting a network request from said one of said  
12 buyer computers thereto;

13           communicating one of said digital advertisements  
14 from one of said merchant computers to said one of said  
15 buyer computers over said public packet switched  
16 communications network in response to said network  
17 request from said buyer computer;

18           displaying said one of said digital advertisements  
19 at said one of said buyer computers, and, in response to  
20 a user request, transmitting from said one of said buyer  
21 computers to one of said merchant computers a purchase  
22 message, and causing a payment request, comprising a  
23 payment amount, to be transmitted into a payment system  
24 in order to initiate authorization of purchase of a  
25 product having real monetary value advertised in said one  
26 of said digital advertisements and in order to initiate  
27 recordation of said payment request and an authorization  
28 in a settlement database; and

29           receiving said purchase message at one of said  
30 merchant computers, and causing said product to be sent  
31 to said user conditioned on said purchase transaction  
32 having been authorized in real time by a financial  
33 authorization network external to said network sales  
34 system, based on an external credit card account or an  
35 external demand deposit account having sufficient credit  
36 or funds of real monetary value available to said  
37 principal making said payment, and conditioned on at  
38 least one message transmitted over said public packet  
39 switched communications network in connection with said  
40 purchase transaction not being a replay of a message  
41 previously transmitted over said public packet switched  
42 communications network.

1           22. A method in accordance with claim 21, further  
2 comprising the step of performing a replay check, at said  
3 payment system, of said payment request to determine



4 whether an identical payment request was previously  
5 transmitted to said payment system.

1 23. A method in accordance with claim 21, wherein  
2 said method further comprises the steps of verifying, at  
3 said payment computer, an authenticator in order to  
4 verify said identity of said principal making payment.

1 24. A method in accordance with claim 23, further  
2 comprising the steps of, upon verification of said  
3 authenticator, sending an authorization request from said  
4 payment computer to said financial authorization network,  
5 and receiving at said payment computer authorization from  
6 said financial authorization network.

1 25. A method in accordance with claim 21, further  
2 comprising the steps of communicating a missing payment  
3 information request message from one of said merchant  
4 computers to said buyer computer to obtain missing  
5 payment information, querying a user for said missing  
6 payment information, and transmitting said missing  
7 payment information from said buyer computer to one of  
8 said merchant computers.

1 26. A method in accordance with claim 21, wherein  
2 said payment request comprises a payment order that  
3 describes the identity of a sender, a payment amount, a  
4 beneficiary, and a nonce.

1 27. A method in accordance with claim 21, wherein  
2 said payment system is external to said plurality of  
3 buyer computers and said plurality of merchant computers.

1           28. A method in accordance with claim 21, wherein  
2 said demand deposit account comprises a debit card  
3 account.

1           29. A method of transferring funds having real  
2 monetary value from a sender to a beneficiary using a  
3 network payment system comprising a plurality of client  
4 computers and at least one payment computer  
5 interconnected by a public packet switched communications  
6 network, said method providing for real-time  
7 authorization of purchase transactions by a financial  
8 authorization network external to said network payment  
9 system and comprising the steps of:

10           constructing a payment request at one of said  
11 client computers specifying a payment amount to be  
12 transferred from a sender to a beneficiary, and causing  
13 said payment request to be transmitted to said payment  
14 computer; and

15           causing a message to be transmitted into said  
16 financial authorization network external to said network  
17 payment system in order to verify that said sender has  
18 adequate funds or credit having real monetary value,  
19 receiving, at said payment computer, an authorization  
20 from said financial authorization system in response to  
21 said message, transmitting an authorization message from  
22 said payment computer to said client computer, causing  
23 said payment request and authorization to be recorded in  
24 a settlement database, and causing funds having real  
25 monetary value to be transferred from said sender to said  
26 beneficiary conditioned on said payment request having  
27 been authorized in real time by said financial  
28 authorization system based on an external credit card  
29 account or an external demand deposit account having  
30 sufficient credit or funds of real monetary value  
31 available to said sender, and conditioned on at least one

32 message transmitted over said public packet switched  
33 communications network in connection with transfer of  
34 said funds not being a replay of a message previously  
35 transmitted over said public packet switched  
36 communications network.

1           30. A method in accordance with claim 29, further  
2 comprising the step of performing a replay check, at said  
3 payment computer, of said payment request to determine  
4 whether an identical payment request was previously  
5 transmitted to said payment computer.

1           31. A method in accordance with claim 29, wherein  
2 said payment request comprises at least a partial  
3 delivery address, and wherein said method further  
4 comprises the step of checking said delivery address  
5 against a database of allowed delivery addresses for said  
6 sender.

1           32. A method in accordance with claim 29, further  
2 comprising the steps of determining at least partial  
3 allowed delivery addresses for said sender, and wherein  
4 said authorization message comprises said at least  
5 partial allowed delivery addresses.

1           33. A method in accordance with claim 29, wherein  
2 said authorization message comprises an authenticator.

1           34. A method in accordance with claim 29, wherein  
2 further comprising the steps of causing an authenticator  
3 that verifies to said payment computer the identity of  
4 said sender to be transmitted to said payment computer,  
5 and examining said authenticator at said payment computer  
6 to verify said identity of said sender.

1           35. A method in accordance with claim 34, further  
2 comprising the steps of generating, at said client  
3 computer, a next expected transaction identifier for said  
4 sender and using it to create said authenticator, and  
5 generating, at said payment computer said next expected  
6 transaction identifier for said sender, and verifying, at  
7 said payment computer, that said authenticator was  
8 created using said next expected transaction identifier.

1           36. A method in accordance with claim 34, further  
2 comprising the steps of generating said authenticator at  
3 said client computer using an external device, and  
4 verifying, at said payment computer that said  
5 authenticator was created using said external device.

1           37. A method in accordance with claim 34, wherein  
2 said payment request comprises a network address of said  
3 client computer, and wherein said method further  
4 comprises verifying, at said payment computer, that said  
5 payment request was constructed at said network address.

1           38. A method in accordance with claim 29, wherein  
2 said payment request comprises a network address of said  
3 client computer, and wherein said method further  
4 comprises the step of checking, at said payment computer,  
5 said network address against a database of allowed client  
6 addresses for said sender.

1           39. A method in accordance with claim 29, further  
2 comprising the steps of determining, at said payment  
3 computer, whether real-time authorization is necessary,  
4 and causing said message to be transmitted into said  
5 financial authorization network to verify that said  
6 sender has adequate funds or credit only if said payment

7 computer has determined that real-time authorization is  
8 necessary.

1 40. A method in accordance with claim 29, wherein  
2 said demand deposit account comprises a debit card  
3 account.

1 41. A network sales system providing for real-  
2 time authorization of purchase transactions, comprising:  
3 a plurality of buyer computers; and  
4 a plurality of merchant computers;  
5 said plurality of buyer computers and said  
6 plurality of merchant computers being interconnected by a  
7 public packet switched communications network;  
8 each of said buyer computers being programmed to  
9 transmit to at least one of said merchant computers, in  
10 response to a user request, a purchase message and to  
11 cause a payment request, comprising a payment amount, to  
12 be transmitted into a payment system in order to initiate  
13 authorization of purchase of a product having real  
14 monetary value and in order to initiate recordation of  
15 said payment request and an authorization in a settlement  
16 database;  
17 at least one of said merchant computers being  
18 programmed to receive said purchase message, and to cause  
19 said product to be sent to said user conditioned on said  
20 purchase transaction having been authorized in real time  
21 by a financial authorization network external to said  
22 network sales system, based on an external credit card  
23 account or an external demand deposit account having  
24 sufficient credit or funds of real monetary value  
25 available to a principal making said payment, and  
26 conditioned on at least one message transmitted over said  
27 public packet switched communications network in  
28 connection with purchase of said product not being a

29 replay of a message previously transmitted over said  
30 public packet switched communications network.

1           42. A method of effecting sales over a network  
2 sales system comprising a plurality of buyer computers  
3 and a plurality of merchant computers interconnected by a  
4 public packet switched communications network, said  
5 method providing for real-time authorization of purchase  
6 transactions and comprising the steps of:  
7           in response to a user request, transmitting from  
8 one of said buyer computers to one of said merchant  
9 computers a purchase message, and causing a payment  
10 request, comprising a payment amount, to be transmitted  
11 into a payment system in order to initiate authorization  
12 of purchase of a product having real monetary value and  
13 in order to initiate recordation of said payment request  
14 and an authorization in a settlement database; and  
15           receiving said purchase message at one of said  
16 merchant computers, and causing said product to be sent  
17 to said user conditioned on said purchase transaction  
18 having been authorized in real time by a financial  
19 authorization network external to said network sales  
20 system, based on an external credit card account or an  
21 external demand deposit account having sufficient credit  
22 or funds of real monetary value available to a principal  
23 making said payment, and conditioned on at least one  
24 message transmitted over said public packet switched  
25 communications network in connection with said purchase  
26 transaction not being a replay of a message previously  
27 transmitted over said public packet switched  
28 communications network.